

Contents of *Aquaculture*, Volume 146

VOL. 146 NOS. 1,2

30 OCTOBER 1996

Diseases, Parasites and Predators

- Non-specific immune responses in families of Atlantic salmon, *Salmo salar*, exhibiting differential resistance to furunculosis
M.J. Marsden (Aberdeen, UK), L.C. Freeman, D. Cox (Loch Ailort, UK) and C.J. Secombes (Aberdeen, UK) 1
- Growth, development, and skin abnormalities of halibut (*Hippoglossus hippoglossus* L.) juveniles kept on different bottom substrates
O.H. Ottesen (Bodø, Norway) and H.K. Strand (Tromsø, Norway) 17

Genetics and Breeding

- Spatial variation in response to selection for live weight and shell length from data on individually tagged Chilean native oysters (*Ostrea chilensis* Philippi, 1845)
J.E. Toro, P. Aguila and A.M. Vergara (Valdivia, Chile) 27

Husbandry and Management

- Combined effects of water temperature and salinity on growth and feed utilization of juvenile Nile tilapia *Oreochromis niloticus* (Linnaeus)
J.S. Likongwe, T.D. Stecko, J.R. Stauffer, Jr. and R.F. Carline (University Park, PA, USA) 37
- Physical and chemical characteristics of sediments from prawn farms and mangrove habitats on the Clarence River, Australia
P.T. Smith (Campbelltown, NSW, Australia) 47
- Recruitment control of Nile tilapia, *Oreochromis niloticus*, by the African catfish, *Clarias gariepinus* (Burchell 1822), and the African snakehead, *Ophiocephalus obscurus*. I. A biological analysis
G. De Graaf, F. Galemoni and B. Banzoussi (Brazzaville, Congo) 85
- The use of napier grass (*Pennisetum purpureum*) and maize (*Zea mays*) bran as low-cost tilapia aquaculture inputs
F.J.K. Chikafumbwa (Zomba, Malawi) 101

Nutrition

- Amino acid availability values for several protein sources for yellowtail (*Seriola quinqueradiata*)
T. Masumoto, T. Ruchimat, Y. Ito, H. Hosokawa and S. Shimeno (Kochi, Japan) 109
- Effect of dietary protein level on spawning performance and amino acid composition of eggs of Nile tilapia, *Oreochromis niloticus*
R.M. Gunasekera, K.F. Shim and T.J. Lam (Kent Ridge, Singapore) 121
- Nutritional value of a spray-dried freshwater alga, *Spongiococcus excentricum*, for Pacific oyster (*Crassostrea gigas*) spat
J. Knauer and P.C. Southgate (Townsville, Qld., Australia) 135

Plasma carotenoid concentration indicates the availability of dietary astaxanthin for Atlantic salmon, *Salmo salar*

T. Storebakken and U.C. Goswami (Sundalsøra, Norway) 147

VOL. 146 NOS. 3/4

10 NOVEMBER 1996

Review

Is sediment deposition the dominant fate of oxytetracycline used in marine salmonid farms: a review of available evidence

P. Smith (Galway, Ireland) 157

Diseases, Parasites and Predators

Development of a colony-blot ELISA assay using monoclonal antibodies to identify *Vibrio* P1 responsible for "brown ring disease": in the clam *Tapes philippinarum*

T. Noel (Montpellier, France), J.-L. Nicolas (Plouzané, France), V. Boulo (Montpellier, France), E. Mialhe (Bethesda, MD, USA) and Ph. Roch (Montpellier, France) 171

Susceptibility and humoral response of brown trout \times lake trout hybrids to infectious hematopoietic necrosis virus: a model for examining disease resistance mechanisms

S.E. LaPatra, K.A. Lauda, G.R. Jones, W.D. Shewmaker (Buhl, ID, USA), J.M. Groff (Davis, CA, USA) and D. Routledge (Logan, UT, USA) 179

Husbandry and Management

Predicting salmon biomass remotely using a digital stereo-imaging technique

T.A. Beddow, L.G. Ross (Stirling, UK) and J.A. Marchant (Silsoe, UK) 189

Influence of Nile tilapia (*Oreochromis niloticus*) stocking density in cages on their growth and yield in cages and in ponds containing the cages

Y. Yi, C.K. Lin (Bangkok, Thailand) and J.S. Diana (Ann Arbor, MI, USA) 205

The effect of background color and rotifer density on rotifer intake, growth and survival of the grouper (*Epinephelus suillus*) larvae

M.N. Duray, C.B. Estudillo and L.G. Alpasan (Tigbauan Iloilo, Philippines) 217

Survival, growth and food conversion efficiency of *Panulirus ornatus* following eyestalk ablation

M.A. Juinio-Meñez (Quezon City, Philippines) and J. Ruinata (Cebu, Philippines) 225

Nutrition

Comparison of chelated zinc and zinc sulfate as zinc sources for growth and bone mineralization of channel catfish (*Ictalurus punctatus*) fed practical diets

M.H. Li and E.H. Robinson (Stoneville, MS, USA) 237

Influence of protein content of broodstock diets on larval quality and performance in Nile tilapia, *Oreochromis niloticus* (L.)

R.M. Gunasekera, K.F. Shim and T.J. Lam (Kent Ridge, Singapore) 245

Physiology and Endocrinology

Relationships between the expression of maternal behaviour and ovarian development in the mouth-brooding cichlid fish *Oreochromis Niloticus*.

P. Tacon (Rennes, France), P. Ndiaye (Talence, France), C. Cauty (Rennes, France), F. Le Menn (Talence, France) and B. Jalabert (Rennes, France) 261

Effect of holding temperature on ovulation, egg fertility, plasma levels of reproductive hormones and in vitro ovarian steroidogenesis in the rainbow trout *Oncorhynchus mykiss*

N.W. Pankhurst, G.J. Purser (Launceston, Tas., Australia), G. Van Der Kraak (Guelph, Ont., Canada), P.M. Thomas and G.N.R. Fortnath (Launceston, Tas., Australia) 277

Book Reviews

Molecular genetics in fisheries 291

Contents of Aquaculture, Volume 146

303

Physiology of fishes	292
Sustainable fish farming	293
Books Received	297
Corrigendum	299
Contents of <i>Aquaculture</i>, Volume 146	301

Contents (continued)

Nutrition

- Comparison of chelated zinc and zinc sulfate as zinc sources for growth and bone mineralization of channel catfish (*Ictalurus punctatus*) fed practical diets
M.H. Li and E.H. Robinson (Stoneville, MS, USA) 237
- Influence of protein content of broodstock diets on larval quality and performance in Nile tilapia, *Oreochromis niloticus* (L.)
R.M. Gunasekera, K.F. Shim and T.J. Lam (Kent Ridge, Singapore) 245

Physiology and Endocrinology

- Relationships between the expression of maternal behaviour and ovarian development in the mouthbrooding cichlid fish *Oreochromis Niloticus*.
P. Tacon (Rennes, France), P. Ndiaye (Talence, France), C. Cauty (Rennes, France), F. Le Menn (Talence, France) and B. Jalabert (Rennes, France) 261
- Effect of holding temperature on ovulation, egg fertility, plasma levels of reproductive hormones and in vitro ovarian steroidogenesis in the rainbow trout *Oncorhynchus mykiss*
N.W. Pankhurst, G.J. Purser (Launceston, Tas., Australia), G. Van Der Kraak (Guelph, Ont., Canada), P.M. Thomas and G.N.R. Forteath (Launceston, Tas., Australia) 277

Book Reviews

- Molecular genetics in fisheries 291
- Physiology of fishes 292
- Sustainable fish farming 293

Books Received 297

Corrigendum 299

Contents of *Aquaculture*, Volume 146 301